AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A protein comprising a ~~the~~ sequence selected from the group consisting of ~~Seq ID No 1 or Seq ID No 4, or a variant thereof,~~ SEQ ID NO:1, a variant of SEQ ID NO:1, SEQ ID NO:4, and a variant of SEQ ID NO:4, wherein the sequence is capable of hydrolysing sphingomyelin.

2. (currently amended): The protein according to claim 1, wherein the ~~Seq ID No 1 or Seq ID No 4 or variant thereof~~ sequence is capable of hydrolysing sphingomyelin at pH 7.5-9.

3. (currently amended): The protein according to claim 1, wherein the ~~Seq ID No 1 or Seq ID No 4 or variant thereof~~ sequence has ~~>50%~~ less than 50% of its hydrolysing activity at pH ~~>7.5~~ less than 7.5.

4. (currently amended): The protein according to claim 1, wherein the variant of SEQ ID NO:1 has at least 80% identity with SEQ ID NO:1 and the variant of SEQ ID NO:4 has at least 80% identity with SEQ ID NO:4 ~~Seq ID No 1 or Seq ID No~~ SEQ ID NO: 4.

5. (currently amended): A nucleotide sequence encoding the protein according to claim 1 ~~any of claims 1-4~~.

6. (currently amended): The nucleotide sequence according to claim 5, wherein the nucleotide sequence comprises ~~Seq ID No~~ SEQ ID NO: 2 or ~~Seq ID No~~ SEQ ID NO: 5.

7. (currently amended): A recombinant expression and secretion vector, comprising: a polynucleotide encoding a secretion signal peptide;

a DNA sequence which promotes transcription in a host cell located upstream from the polynucleotide encoding the secretion signal peptide;
a DNA sequence encoding a protein according to claim 1 ~~any of claims 1-4~~ in a translation reading frame with said polynucleotide encoding the secretion signal peptide; and
a transcription terminator sequence located downstream from the DNA sequence encoding said protein.

8. (currently amended): A host cell, comprising:
the recombinant expression system according to claim 7, wherein
the host cell expresses ~~from which~~ Alk-Smase ~~is expressed~~.

9. (currently amended): The host cell according to claim 8, wherein
the host cell is selected from the group consisting of a bacteria, a mammalian cell ~~or~~ and a yeast cell; and ~~which~~
in the absence of the recombinant expression system according to claim 7, the host cell does not normally produce an Alk- Smase.

10. (currently amended): A method for isolation of human Alk-Smase protein, the method comprising the steps of:
~~xvi)~~ providing a small intestinal or colon content from a human~~,~~ ;
~~xvii)~~ homogenising the small intestinal or colon content;
~~xviii)~~ purifying Alk-Smase from the homogenized content using DEAE Sephadex chromatography;
~~xix)~~ purifying the Alk-Smase using Uno anion exchange chromatography~~,~~ ; and
~~xx)~~ purifying the Alk.Smase using hydrophobic chromatography, thereby isolating the human Alk-Smase protein.

11. (currently amended): A method for preparation of recombinant Alk-Smase protein capable of hydrolysing sphingomyelin, the method comprising the steps of :
~~ix)~~ providing a host cell according to claim 8 ~~any of claims 8-9~~ and a host cell growth medium~~,~~ ;
~~x)~~ preparing a host cell culture;

~~xi)~~ culturing the host cell culture ; and
~~xii)~~ harvesting the host cell culture and recovering the human recombinant Alk- Smase.

12. (currently amended): The method according to claim 11, wherein the Alk-Smase protein is recovered ~~either~~ from the culture medium~~,~~ or the host cells ~~or after separating the host cells from the culture medium~~.

13. (currently amended): An isolated Alk-Smase protein, comprising the protein according to claim 1 ~~any of claims 1-4, having~~ , wherein the protein has an active site with the amino acid sequence AFVTMTSPCHFTLVTGKY (~~Seq ID No~~ SEQ ID NO: 3) or a variant thereof.

14. (currently amended): A composition , comprising : a protein according to claim 1; ~~any of claims 1-4, or a nucleic acid according to any of claims 5-6, or an isolated Alk-Smase according to any of claims 12-13,~~ and a biocompatible carrier or additive.

15. (currently amended): ~~Use of~~ A method for treating colon cancer, comprising: administering a composition comprising at least one of a protein according to claim 4, ~~any of claims 1-4, or~~ a nucleic acid according to claim 5, and ~~any of claims 5-6, or~~ an isolated Alk-Smase according to claim 12 to a patient ~~any of claims 12-13, for the preparation of a pharmaceutical composition for the treatment of colon cancer~~.

16. (currently amended): A kit , comprising :
the protein according to claim 1 ~~any of claims 1-4,~~ or the isolated protein according to claim 13~~,~~ ; and
a stabiliser.

17. (original): The kit according to claim 16, wherein the protein is in a lyophilised form or freeze-dried form.

18. (new): The method according to claim 12, wherein the Alk-Smase protein is recovered after separating the host cells from the culture medium.

19. (new): A composition, comprising:
a nucleic acid according to claim 5; and
a biocompatible carrier or additive.

20. (new): A composition, comprising:
an isolated Alk-Smase according to claim 12; and
a biocompatible carrier or additive.